

IN THE CLAIMS:

1 - 20. (Canceled)

21. (New) A method of performing a medical procedure, said method comprising:

providing a radiation-shielding cubicle having an interior defining a medical personnel region and including a first wall having an opening therein;

locating the cubicle with respect to an x-ray table so a portion of the x-ray table extends through the opening into the interior of the cubicle; and

separating medical personnel from an x-ray emitter disposed outside of the cubicle using the first wall to shield the medical personnel from radiation emitted by the x-ray emitter.

22. (New) A method in accordance with claim 21 further comprising joining the x-ray table to the cubicle using a radiation-shielding flexible interface.

23. (New) A method in accordance with claim 22 wherein said joining the x-ray table to the cubicle using a radiation-shielding flexible interface comprises joining the x-ray table to the first wall using the radiation shielding flexible interface.

24. (New) A method in accordance with claim 21 further comprising sealing the opening in the first wall using a flexible radiation-resistant skirt.

25. (New) A method in accordance with claim 21 further comprising circumferentially joining the x-ray table to the cubicle using a flexible radiation-resistant skirt.

26. (New) A method in accordance with claim 21 further comprising attaching a radiation-shielding screen to the x-ray table so the radiation-shielding screen covers a portion of a patient supported by the x-ray table and covers a portion of a top surface of the x-ray table.

27. (New) A method in accordance with claim 26 further comprising joining the first wall to the radiation-shielding screen using a flexible radiation-resistant skirt.

28. (New) A method in accordance with claim 26 wherein the radiation-shielding screen has at least one port for facilitating access to the patient, said method further comprising:

inserting procedural equipment through the port to access the patient with the procedural equipment; and

performing a medical procedure on the patient using the procedural equipment.

29. (New) A method in accordance with claim 28 further comprising positioning a cloak over the port to create a substantially radiation-resistant seal over the port and around the procedural equipment.

30. (New) A method in accordance with claim 26 wherein the radiation-shielding screen has at least one port for facilitating at least one of connection and access to controls for at least one of the x-ray table, the x-ray emitter, and a catheterization system monitor, said method further comprising accessing the controls using the port to control at least one of the x-ray table, the x-ray emitter, and the catheterization system monitor.

31. (New) A method in accordance with claim 21 further comprising:

detecting radiation levels within the radiation-shielding cubicle; and

terminating operation of the x-ray emitter when the detected radiation levels are above a predetermined level.

32. (New) A method in accordance with claim 21 further comprising monitoring portions of the patient located outside the radiation-shielding cubicle from inside the radiation-shielding cubicle using a video camera.

33. (New) A method in accordance with claim 21 further comprising communicating with the patient from inside the radiation-shielding cubicle using a two-way microphone system.

34. (New) A method of using a radiation protection system comprising an x-ray table having a top surface for supporting a patient and a radiation-shielding screen attached to the x-ray table for covering a portion of the patient and a portion of the top surface of the x-ray table, wherein the radiation-shielding screen includes at least one port, said method comprising:

extending the radiation-shielding screen over a portion of the patient supported by the top surface of the x-ray table;

inserting procedural equipment through the port to access the patient with the procedural equipment; and

performing a medical procedure on the patient using the procedural equipment.

35. A method in accordance with claim 34 wherein the radiation-shielding screen comprises a vascular access drape having at least one port for accessing the patient and a circumferential pleated portion, said method further comprising positioning the circumferentially pleated portion of the vascular access drape so the drape is operatively connected to the x-ray table to form a radiation-resistant seal.

36. (New) A method in accordance with claim 34 wherein said extending the radiation-shielding screen over a portion of the patient supported by the top surface of the x-ray table comprises positioning the radiation-shielding screen so the port is located over one of the right and left femoral vascular access regions of the patient, and said inserting procedural equipment through the port to access the patient with the procedural equipment comprises inserting a catheter through the port to access one of the right and left femoral vessels of the patient with the catheter.

37. (New) A method in accordance with claim 34 wherein the radiation protection system further comprises at least one radiation-closing cloak having a re-closable radial slit and a central orifice, said method further comprising positioning the radiation-closing cloak over the port and around the procedural equipment passing through the port to create a substantially radiation-resistant seal over the port and around the procedural equipment.

38. (New) A method in accordance with claim 34 wherein the radiation protection system further comprises at least one radiation-closing cloak sized for positioning over the port,

said method further comprising positioning the cloak over any unused ports to create radiation-resistant seal over the port.

39. (New) A method of performing a medical procedure, said method comprising:

- providing a radiation-shielding wall having an opening therein;
- locating the wall with respect to an x-ray table so a portion of the x-ray table extends through the opening;
- joining the x-ray table to the wall using a radiation-shielding flexible interface;
- sealing the opening in the first wall using a flexible radiation-resistant skirt; and
- using the wall to separate medical personnel located adjacent a first side of the wall from an x-ray emitter disposed adjacent a second side of the wall opposite the first side to shield the medical personnel from radiation emitted by the x-ray emitter.

40. (New) A method of using a radiation protection system comprising an x-ray table having a top surface for supporting a patient, a radiation-shielding screen attached to the x-ray table for covering a portion of the patient and a portion of the top surface of the x-ray table, and controls for controlling the system, wherein the radiation-shielding screen includes at least one port, said method comprising:

- extending the radiation-shielding screen over a portion of the patient supported by the top surface of the x-ray table;
- accessing the controls through the port; and
- controlling the system using the controls.